

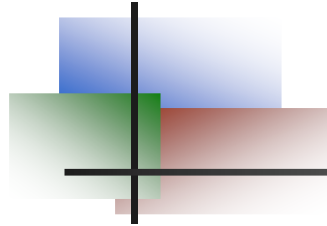
Microorganisms of nature in human service

agrologistics 
innovative solutions

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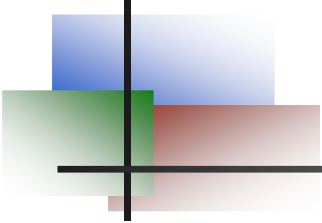


Microorganisms-bacteria solutions

Reliable solutions are given in the following problems:

➤ **Bad odors:**

1. from trash bins
2. from public toilets
3. from docks
4. from central food markets
5. from wastewater treatment plants
6. from sewage manholes
7. from illegally waste areas
8. from food preparation areas (restaurants, catering, etc)

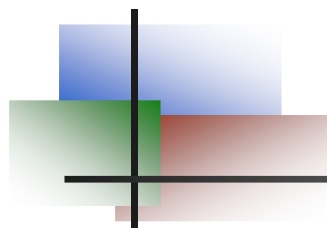


Microorganisms-bacteria solutions

- **High concentration of FOGs in pipes:**
 1. at house pipelines
 2. to mains drainage
 3. at grease separators

- **Inefficient operation of wastewater treatment plants:**
 1. in industrial treatment plants
 2. to compact treatment plants for houses
 3. in house septic tanks
 4. in municipal treatment plants

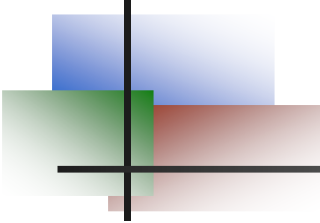
- **Soil and water bioremediation of toxic wastes**



Microorganisms of nature in human service

In nature exists microorganisms (bacteria) with the ability to degrade complex organic compounds, contributing in this way to maintain balance in the environment. These microorganisms are able to decompose FOGs (fat – oil – grease), domestic and industrial wastewater and more.

Agrologistics, activating in research and development of modern environmental technologies, has developed considerable expertise which uses natural microorganisms and provides effective solutions to many problems of public authorities, companies or individual customers. Agrologistics, using its long experience in spreading innovations, after significant research and study of relevant problems and solutions abroad, is able to provide solutions to problems such as odor, non-integrated wastewater treatment (domestic and industrial), bioremediation of contaminated soils, water management problems and high concentration of fatty substances in the drainage network.

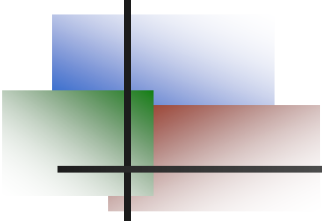


Bacteria solutions concept

The implementation of new solutions for environmental protection offered by Agrologistics are based on advanced know-how and specific principles, such as :

- The solutions must not conflict with the natural environment, but derive from it. In fact, they exploit the mechanisms of nature for man service
- Can be applied both in large scale problems (eg in sewage treatment plants and municipalities) and a small scale (eg, maintenance of drainage system houses)
- Provide security during running
- Ease application and maintenance
- be distinguished from the reliability and effectiveness

At this level the Agrologistics working with Millennium Steel Ltd., dealer CustomBio Inc, Greece.



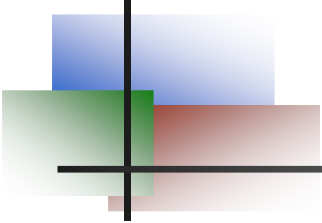
Bad odors

Unpleasant odors from any source are produced when one or more of the following parameters is active:

- an organic substance by the degradation of complex organic molecules from indigenous micro-organisms is set free
- sulfur compounds that exist as a constituent amino acid sulphate are set free
- there is incomplete ventilation of places where organic compound is stored, which cause the elimination the micro-organisms that degrade organic compound

In any case, the problem is the incomplete and complete degradation of organic compounds from indigenous bacteria.





Bad Odors

Solutions until today:

The current solutions aim primarily at covering or trapping unpleasant odors rather than address the source of the odor, as would normally be.

Agrologistics solution :

Agrologistics solution focus on addressing the source of the odor after studying the problem and the use of microorganisms derived from nature. The addition of new, more robust and more efficient microorganisms provide a solution to the problem in various ways:

- new micro-organisms compete with indigenous and because of the high population growth rate to "consume" all "food", so that the indigenous to "starve" and disappear
- by appropriate selection of micro-organisms that degrade these compounds, which can not of course the growing micro-organisms
- new micro-organisms work collaboratively with indigenous, achieving complete decomposition of the organic load

High concentration of FOGs in pipes

Main characteristics of FOGs are:

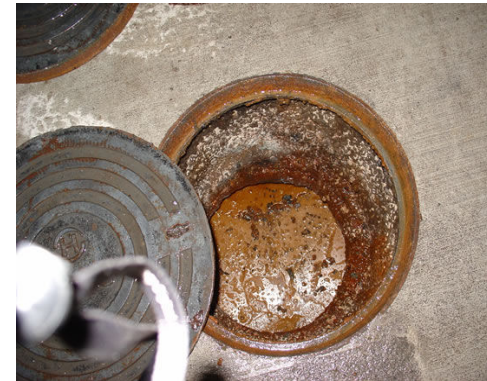
- they consist of complex organic molecules
- can not be dissolved in water
- solids that condenses at a relatively high temperature

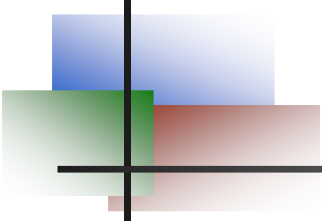
At the entrance of a fogs sewers system, the procedure is:

- rapid cooling and solidification of fogs
- concentration in the walls of pipes, ducts and manholes
- additional deposition of fog in places that have already deposited other previously

So over time the results which are occurred are:

- clogging of pipes, pipelines and wells, making impossible the pass of the waste
- Very bad odors from sewer pipes, houses central drainage wells, or grease separators





High concentration of FOGs in pipes

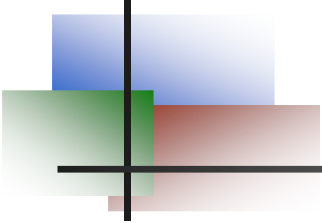
Solutions until today:

- use of strong chemicals which damages the internal conductors, carrying the fog at a later point in the network and causes serious health risks for people who use them.
- use of chemicals does not solve the problem and has a significantly higher cost of implementation

Agrologistics solution:

Adding microorganisms that break down complex molecules of fogs, is the only solution that provides:

- complete removal of concentrated grease
- obstruction of drainage
- protection of the construction of drainage
- elimination of unpleasant odors from pipelines and wells
- pump stations protection



Inefficient operation of wastewater treatment plants

Environmental law requires the functioning of various sizes wastewater treatment plants. **Often there is malfunctioning of the plant, mainly due to:**

- waste overloading, either due to poor design or due to increased load
- entry of toxic organic substances
- significant amount of sludge

In each case of inefficient plant operation, problems occur such as:

- Very bad odors in the wider surroundings
- Ineffective waste treatment
- Concentration of fogs
- Serious environmental problems

Inefficient operation of wastewater treatment plants

Solutions until today:

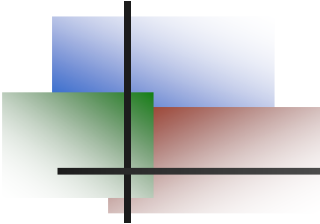
- extended ventilation and design of costly expansions of the plant.

Agrologistics Solution:

A treatment plant uses micro-organisms, present in the waste, to treat wastewater. It is noted, however, that a rate of about 5 to 10% of them have an active role in the degradation of the organic load of waste. By adding suitably selected micro-organisms that work cooperatively with existing we can achieve:

- reducing the amount of sludge derivative
- degradation of fogs
- achieving the desired degree of waste treatment
- increasing the proportion of 'active' bacteria
- Easy restart function after “toxic shock”





Soil and water bioremediation of toxic wastes

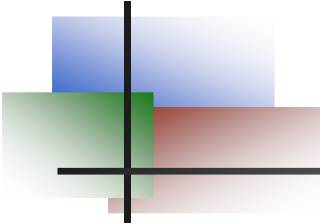
Public health and natural environment of a region often threatened by pollution from:

- Aromatic hydrocarbons
- Chlorinated organic solvents
- Pesticides
- Petrochemical products (eg engine oils)
- Other toxic substances

These pollutants are responsible for:

- Number of serious human diseases
- Destruction of animal and plant community in the area
- Permanent damage to the abiotic environment (soil, water resources, etc.)





Soil and water bioremediation of toxic wastes

Agrologistics solution:

The decontamination of the area can be achieved with the inactivation or removal of contaminants from soil or water by using micro-organisms. The micro-organisms are able to use these complex contaminants as energy and carbon and produce carbon dioxide and water.

- Greater efficiency of bioremediation of contaminated sites is achieved by enhancing the soil micro-organisms in quantities directly to the infected area. The micro-organisms are selected appropriate to break down complex organic compounds emissions. Strengthening environmental micro-organisms to achieve a significant increase in population, which works with indigenous growing micro-organisms, acting with speed and efficiency in the degradation of the pollutant

- The bioremediation of the environment, restore the physical ecosystem by depleting pollutants and allowing living organisms to survive and develop

Description of natural microorganisms (bacteria)

Bacteria are the more numerous agencies of nature, with ability to degrade complex organic molecules. Products provided to the market by Agrologistics Ltd., consisting of bacteria which are dormant and reactivated during the implementation. They have great proliferation rate and most importantly, stay active as long as they have "food". This means that they continue their action for a long time after application.

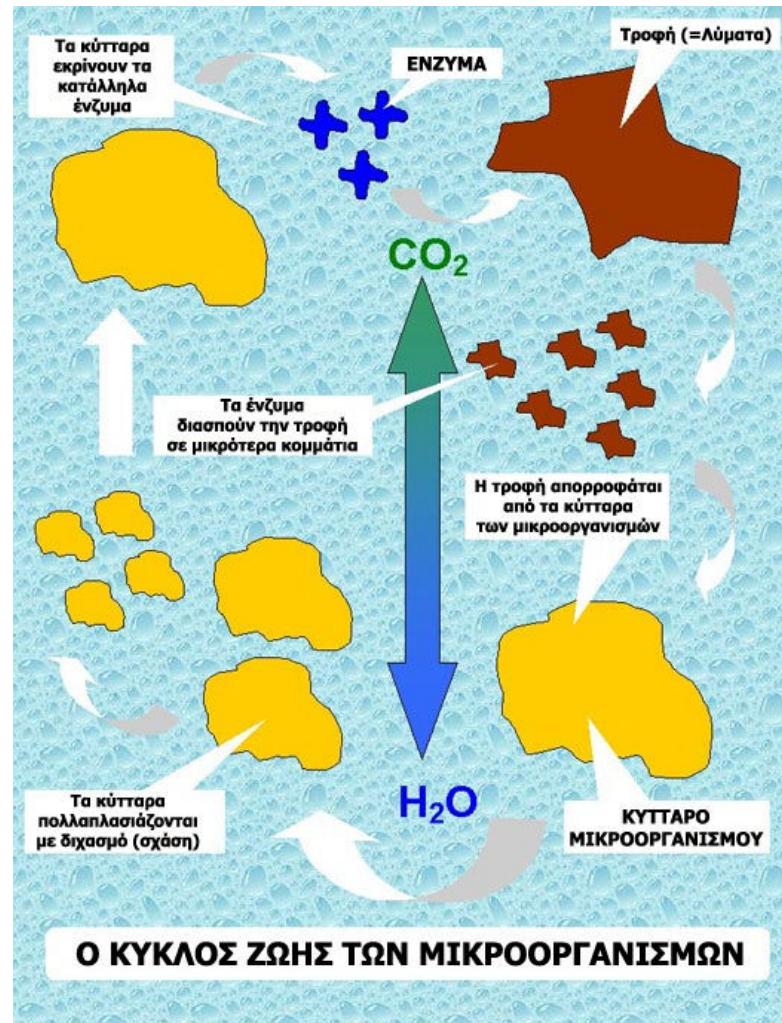
Bacteria used belongs to class 1 according to the classification of the American Type Culture Collection. The Class 1 bacteria are by definition non-pathogenic and non-opportunistic pathogen. These organisms are safe and do not cause infectious or contagious effects in humans, animals or plants. From the USDA (US Department of Agriculture) has been checked each body contained in the products and has issued certificate. Also the products are accompanied by certificates from the Greek General Chemical State. The bacteria are not genetically modified and are in the pe oranges and the digestive system of living organisms.

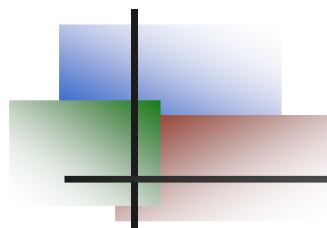
The products are manufactured of biotechnology laboratories CustomBio Inc.



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Description of natural microorganisms (bacteria)





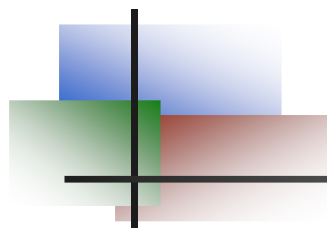
Custom OE™

Where it can be applied:

- to remove the stench from garbage bins, landfills, sewage disposal, docks, sewage manholes, public, private and chemicals toilets, muster livestock, restaurant or home kitchen, smoke from public rooms, removing flies and insects.

How it works:

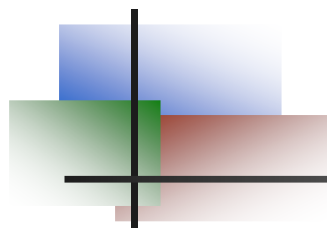
- Once the bacteria are deposited on a surface, are activated and begin to multiply. For their survival and proliferation requires specific nutrients. The nutrients to the bacteria employ the compounds that cause odor, so they do not appear.
- The bacteria obtain deodorizing through another mechanism. The waste developed indigenous colonies of bacteria, which are responsible for odors. The bacteria multiply formula OE with much higher rates leading to consume the nutrient load before the indigenous, to starve and be destroyed.
- **An important advantage** is that the bacteria of formula OE are still actively feeding so to address the odor even long after application.



Custom OE™







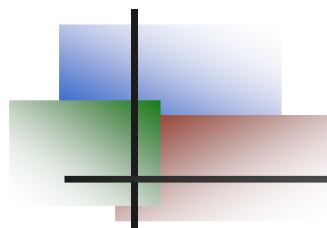
Custom GT™

Where it can be applied:

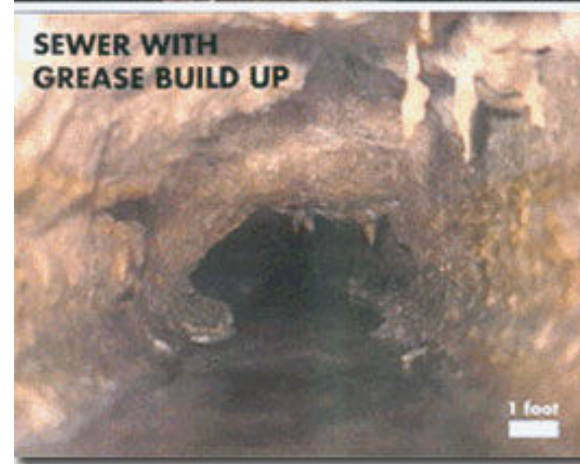
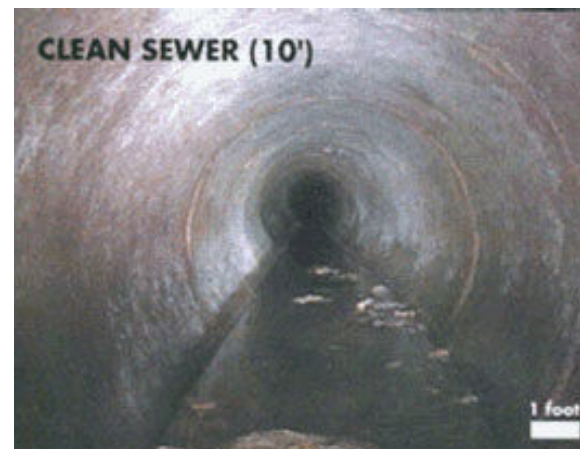
■ to split fat, vegetable or animal proteins, lipids and starch in grease traps, drainage from super market and mainly from restaurant kitchens, fast food, hotels, confectioners, catering.

How it works:

■ The formula GT is composed of bacteria that produce large quantities of enzymes that break down large complex organic compounds and convert them into food for bacteria. This achieves a significant reduction in the amount of fat going into the sewer system. In effect the blockage and protect the pipes and the network and the proper functioning of grease traps while limiting the maintenance.

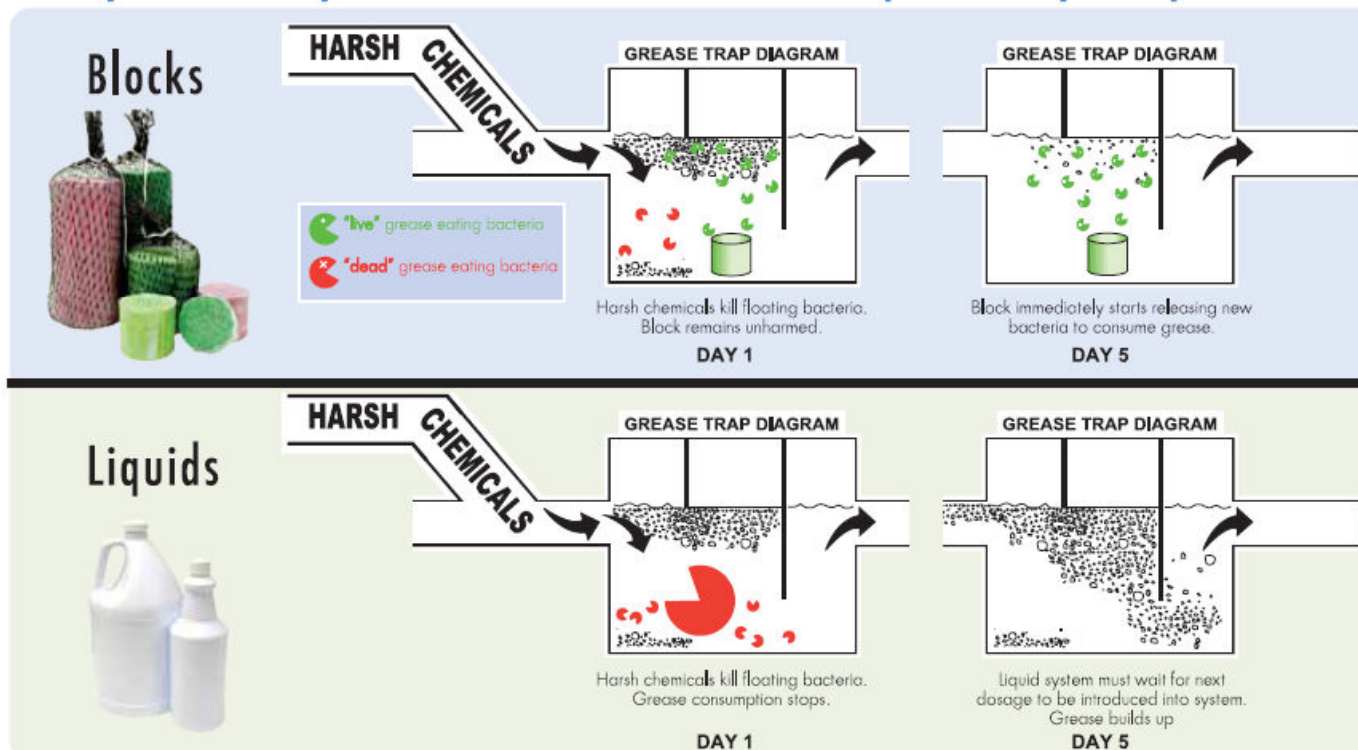


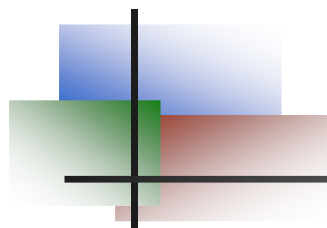
Custom GT™



Custom GT™

Why are enzyme blocks better than liquid enzyme products?





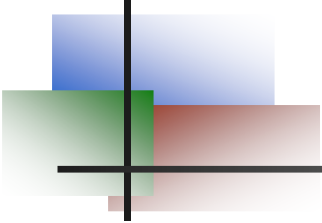
Septic Fizzytabs™ & Custom ST™

Where it can be applied:

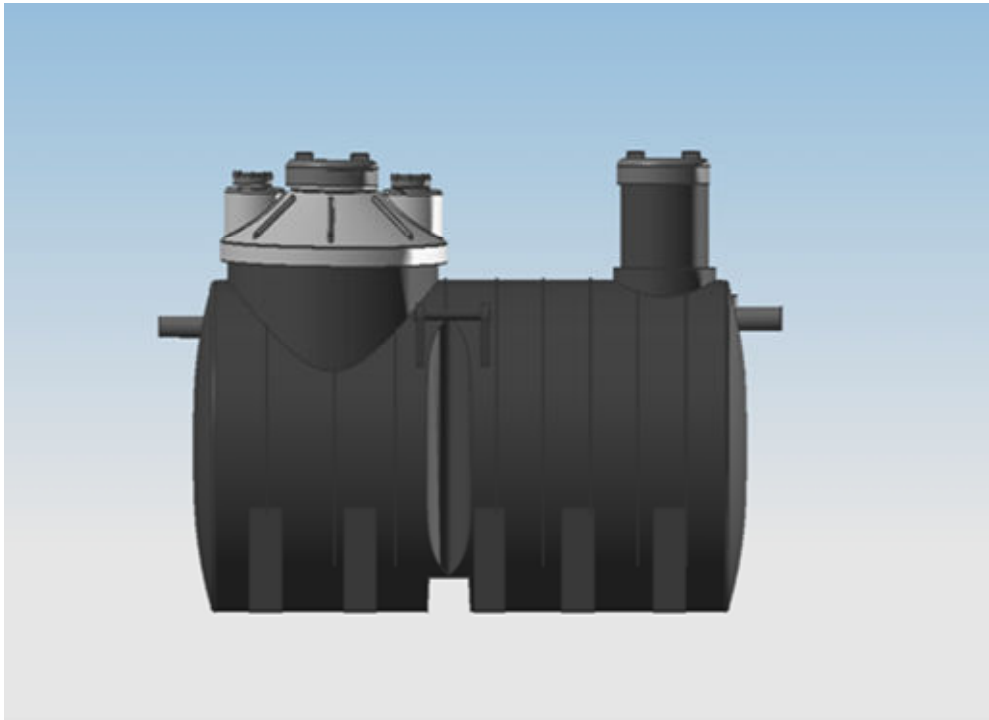
The Septic Fizzytabs™ used for protection and cleaning of drainage pipes of a house or a building. Breaks down fats, proteins and starch, thereby protecting the piping and the septic tank of regular maintenance and cleaning. This Custom ST™ used in compact biological treatment plants and septic tanks of either absorbent or residential homes.

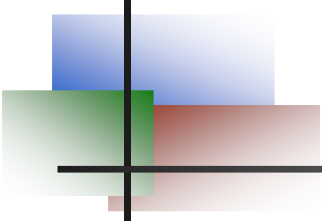
How it works:

- The bacteria in Septic Fizzytabs™ degrade and consume those substances that clog the pipes, exacerbate the operation of septic tanks and creating unpleasant odors. Also the bacteria that exist in the formula help to improve the functioning of the septic system thus grows much time it needs cleaning.
- Bacteria Custom ST™ degrade the organic sludge to concentrate and reduce thus the odor and frequent cleaning of the system, thereby contributing to smooth operation.

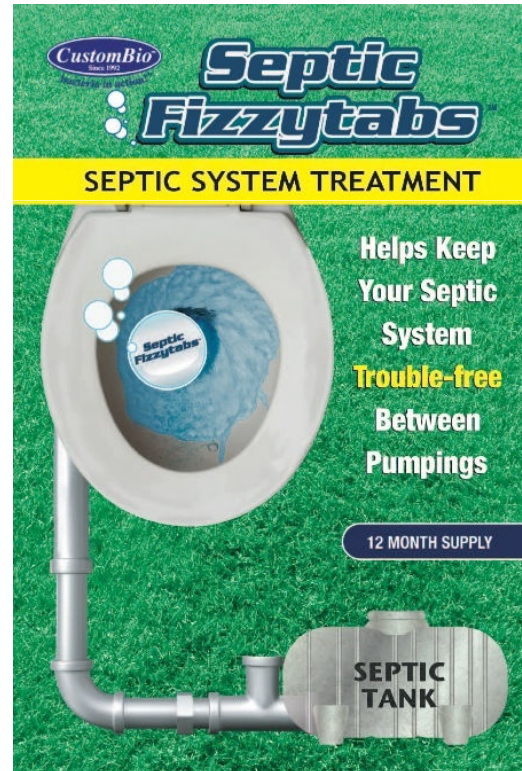


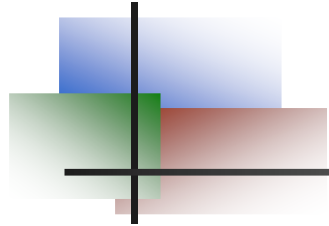
Septic Fizzytabs™ & Custom ST™





Septic Fizzytabs™ & Custom ST™





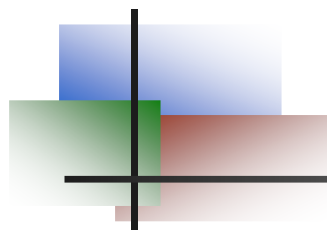
Custom FM™

Where it can be applied:

Used in wastewater treatment plants in municipalities and factories. Can successfully applied for starting operation of sewage treatment plants, to stabilize their operations, to reduce the concentration of pollutants (eg hydrocarbons) to reduce the BOD and COD, BOD for stabilization and COD, to improve the performance turbo systems or under-ventilate, on improving the results of pre-treatment and degradation of fat of any origin, for the optimization of water with low or high temperature, improve the rate of sedimentation of suspended solids and hence the water clarity of the effluent, reducing the sludge produced, the reduction of unpleasant odors.

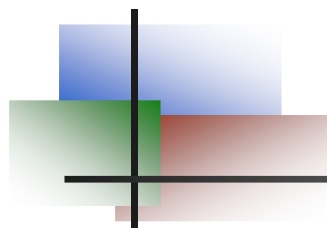
How it works:

The Custom FM™ contains targeted micro-organisms that are able to deconstruct part of the sludge. Enhance significantly the number of active bacteria in sewage treatment plants and the high rate of proliferation contribute to fast degradation of waste.



Custom FM™





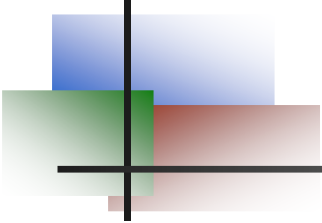
Custom HCTM

Where it can be applied:

For reducing petroleum hydrocarbons, chlorinated organic solvents, pesticides and other environmentally hazardous substances in water or soil. Applied for the remediation of contaminated soils, lakes, streams and oil - water separators.

How it works:

- The formula HC TM consists of micro-organisms that have the ability to degrade petroleum hydrocarbons into carbon dioxide and water
- Using the formula HC TM is achieved rapid growth in micro-organisms in one area thus reducing the disperse of contaminants widely. The action continues as the polluting substance exists in soil or water, until the final restoration
- In the case of use in oil - water separators ensure the degradation of the oil, allowing its treatment with household wastewater



Custom HC™

